

COAL LIQUEFACTION IN A SLURRY SYSTEM, S. A. Qader, G. Haider, W. H. Wiser, Department of Mining, Metallurgical and Fuels Engineering, University of Utah, Salt Lake City, Utah 84112.

Coal impregnated with catalysts was slurried with a coal derived oil and liquefied in a stirred tank reactor in the temperature range 425-475°C under hydrogen pressure of 3000-4000 psi. Coal conversions of 90-95 percent were obtained and oils containing 0.6-0.9 percent sulfur were produced from coals containing 2.1-3.5 percent sulfur. The catalytic activity varied in the order stannous chloride > ammonium molybdate > zinc chloride. However, ammonium molybdate was found to have better selectivity and product obtained with stannous chloride was found to be of better quality. Regenerability of the spent catalysts was found to be poor.